Flightfax

ARMY AVIATION RISK-MANAGEMENT INFORMATION

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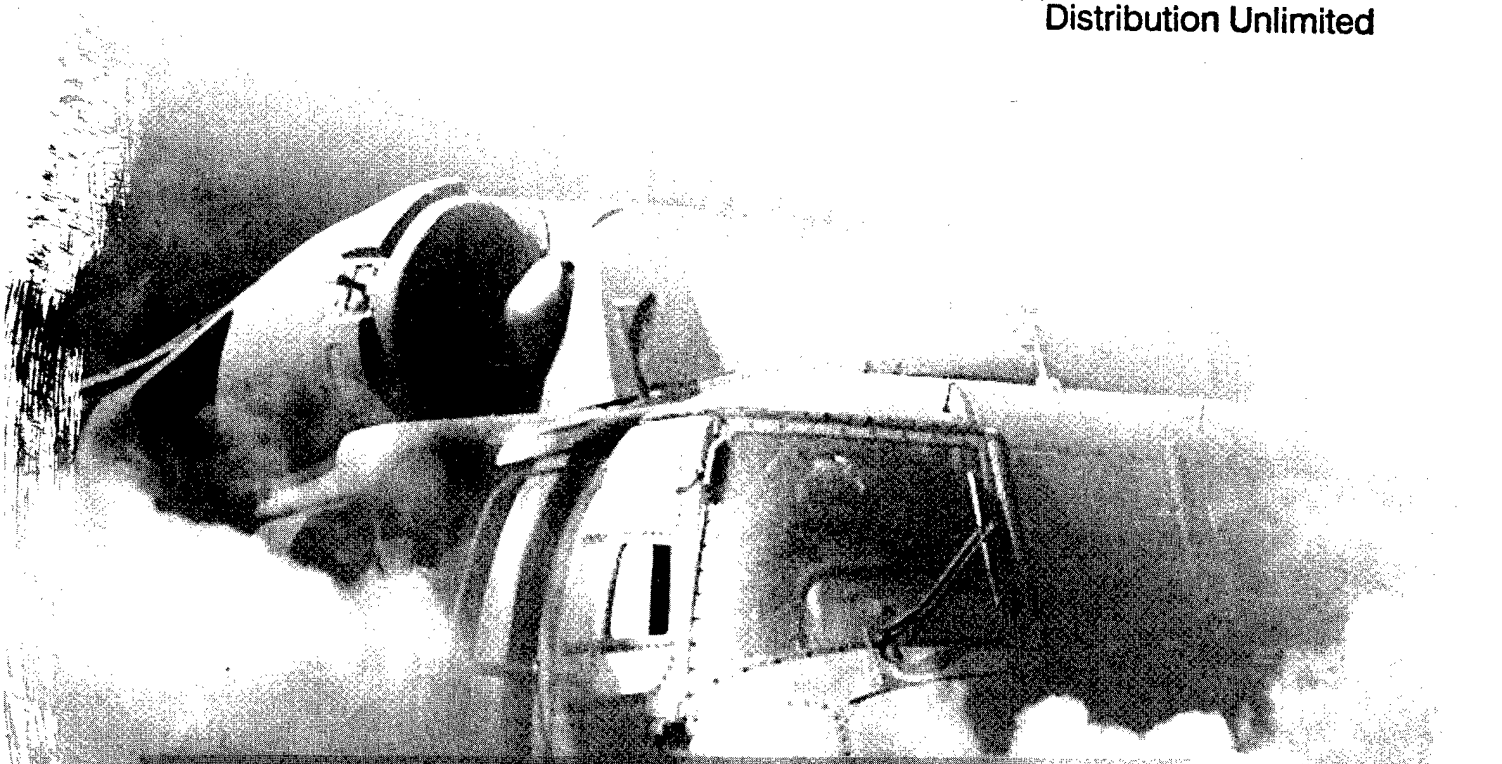


Inadvertent IMC-

We didn't think it could happen to us- until the day it did.

What Do You Mean, They Went Inadvertent IMC?

As the unit Safety Officer, that was my response when I heard that one of our crews had "punched in." Of all the times for it to happen, it occurred during a deployment to Bosnia, over mountainous terrain, and at night while wearing Night Vision Goggles. If that wasn't bad enough, the flight was a MEDEVAC mission with a patient on board and the two pilots combined, had about 800 total flight hours. (The PC did have some additional civilian flight experience and is considered one of the more squared-away pilots-in-command in the company.)

I used to consider inadvertent IMC (IIMC) as a "self-induced emergency caused by pilot error." For the most part I still think that's true. But, I guess there are times when you just cannot see the clouds. Or, if you're wearing NVGs, by the time you realize that you're in a cloud, it's too late to continue Visual Meteorological Conditions.

I never gave IIMC much thought until that day. We're not supposed to do it, we have procedures in place in case we do it, and nobody ever does it. So why worry about it? I've been in Army aviation for more than 11 years and had never been in a unit when a crew had gone IIMC.

This perfect track record had lulled me into a false sense of security. It allowed me to think that it couldn't happen, or wouldn't happen. Not on my watch anyway.

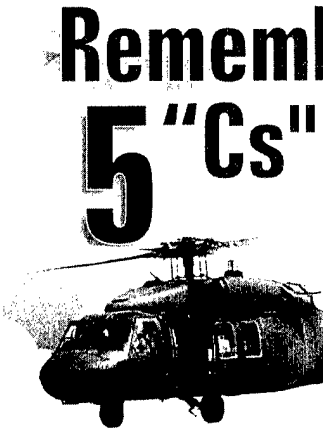
"IF THE WEATHER IS BAD, DON'T FLY"

Why should it happen? We train our crews to avoid it at all costs. We tell them over and over, don't attempt to fly VMC in IMC conditions. It's dangerous. We've all seen the Safety Center posters showing the catastrophic results. If weather is bad, don't fly. If weather gets bad, turn around and go back, or land where you are and wait it out. Or, if you are trained, equipped, prepared, and proficient for IMC/IFR flight, request an IFR clearance from ATC and continue the mission IMC/IFR. (That last option may not always be available in Bosnia, or on other deployments, based on local NAVAIDS and instrument approaches.)

SCUD RUNNING

Have we all been lulled into a false sense of security? We've all heard the old pilot joke: "If it's too bad to go IFR, we'll go VFR."

To avoid going IFR, many of us have gone scud running. A Federal Aviation Administration publication defined scud running as *"pushing the capabilities of the pilot and the aircraft to the limits by trying to maintain visual contact with the terrain while trying to avoid physical contact with it."*



I've had several encounters with deteriorating weather while flying VFR. There have been many times when I simply turned around and went home. On a few occasions, I radioed ATC and received an IFR clearance so that I could continue the mission IMC. But, I've never gone IMC

inadvertently. I've turned down countless missions (including MEDEVAC missions) because of poor weather. Somehow it's easier to refuse a mission while standing in the flight operations office, than refusing to continue to fly a mission while in the air. We all want to succeed in our mission, especially if that mission is to save a life.

There are times when a patient's only hope of survival may be via a flight on an Army helicopter. Air ambulance units, like the one I'm in now, are frequently called upon to fly in poor weather and at a moment's notice. All too often, DUSTOFF crews will fly a MEDEVAC mission in weather that they wouldn't even consider flying in on a training flight. (Been there, done that.)

The desire to succeed can easily turn into a perceived pressure to complete a mission, particularly in the case of a MEDEVAC mission. That pressure is almost always self-induced and is felt by pilots and even non-rated crewmembers. Commanders will always support crews that turn down missions for safety reasons.

According to an NTSB study, unplanned entry into IMC is the single most common factor in fatal emergency medical service helicopter crashes. Because most of the IIMC accidents result in pilot fatalities, accident investigators are able to learn little about the events that lead to the accidents. In cases where pilots lived to tell their story, it's like the Safety Center has been telling us all along, the pilots tried to fly VMC in IMC conditions. They also felt pressure to accomplish the mission, in spite of deteriorating weather conditions.

Fortunately for those of us in Army aviation, there are established procedures in place that prepare us in the event that we do go IIMC. We brief IIMC procedures with the crew prior to every flight. The Aircrew Training Manual (ATM) clearly states, step-by-step what to do after encountering IIMC. Local standard operating procedures (SOP) also provide guidance in case we accidentally punch in.

On this night when our crew went inadvertent, they did everything by the book, just like they were taught. The PC briefed IIMC procedures to the crew prior to the mission. The pilots obtained a valid weather briefing and had even updated it just prior to takeoff. The PC had the only available instrument approach procedure open and strapped to his kneeboard and approach control frequencies were set in the radios. (The weather forecast called for better than VFR conditions, but proved to be incorrect.)

About five minutes after take-off, the pilots watched as the ground lights started to fade, flicker, and then disappear. They controlled the aircraft just like the ATM tells them to and began the local IIMC recovery procedures. The initial feelings following going IIMC included fear, anxiety, and nervousness; the first 30 seconds were the worst. Once they knew that the aircraft was under control and they transitioned from NVGs to instruments, they felt much better. Thankfully, this crew was prepared for the worst when it happened. With the assistance of ATC, the aircraft broke out on final of an ILS approach and landed safely.

NOW I KNOW

Now I know that sometimes aircrews really do go inadvertent IMC. Now I know that pilots can't always see the clouds as they approach them. Now I know that the IIMC procedures in the ATM work. Now I know that the IIMC procedures in the SOP work. And now, you know, too.

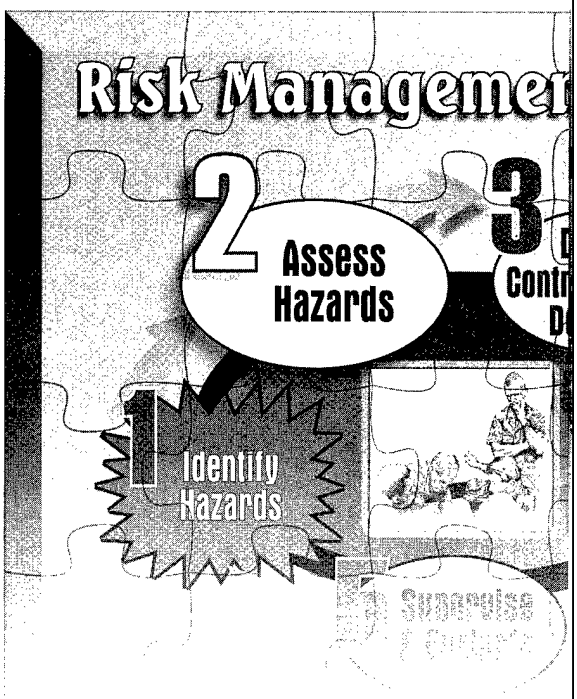
—MICHAEL K. PHILLIPS Aviation Safety Officer 57th Medical Company (AA) / FME DSN 314-762-0258 / 0166 , e-mail AASAFETYOFFICER@e-mail-tc3.sigcmd.army.mil

References: FAA. *Aeronautical Decision Making for Helicopter Pilots.* Report no. DOT/FAA/PM-86-45, February 1987.

Harris, Jowl S. *Every Helicopter Pilot Must be Prepared for Inadvertent Entry into Instrument Meteorological Conditions.* Helicopter Safety. Flight Safety Foundation, March-April 1996.

Truth or Consequences

This is the second of a 5-part series on the risk management process. This article focuses on Step 2 "Assess the hazards."



In the past 18 months, I have had the unfortunate task of investigating accidents that resulted in the deaths of 14 soldiers. Without exception, these soldiers were performing their duties in an outstanding manner; giving their all; working hard to carry out their missions for their units, the Army, and the nation. They made the ultimate sacrifice in the service of their country.

I will never forget what these soldiers have done. I will also never forget that during many of these investigations, I was told that others knew of the dangers these soldiers and their comrades faced while performing their duties. That's right...in many cases, someone had already identified that something wasn't right. They had identified the potential hazards.

Unfortunately, they did not determine the likelihood that an accident would occur because of these hazards. They ignored the critical Step 2 of the risk management process.

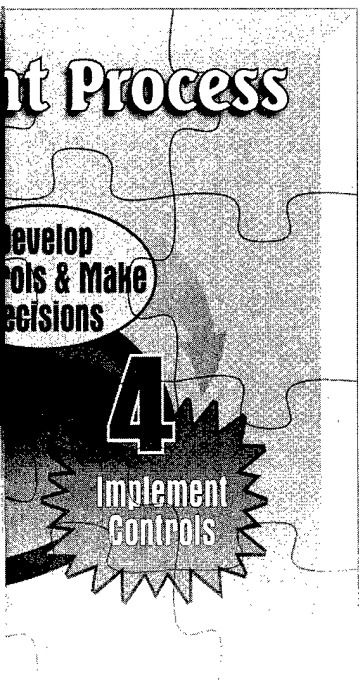
Last month, we discussed the first step in the Army's 5-step risk management process—Identify hazards—in an article titled "Have We Forgotten How to Teach What Right Looks Like?" Now, we'll look at Step 2: Assess the hazards. We'll discuss the importance of truthfully assessing risks associated with those hazards we identified. And, we'll also discuss gambling with the consequences of performing tasks and executing missions with hazards inadequately assessed.

Field Manual 100-14, *Risk Management,* states that step two takes place after you have identified a hazard. To assess the hazard, first determine the probability of a hazardous event occurring, and then address the potential severity resulting from this hazardous event. In other words, once you know that something doesn't look right, make an assessment of how likely it is that this hazard will cause harm to you, your unit, your equipment, or your mission. Then determine that ***IF*** this hazardous event occurs, how ***MUCH*** harm will it cause?

Conducting an effective assessment requires broad understanding of the task/mission at hand. The person making the assessment uses his knowledge of applicable regulations, procedures, and SOPs. He also uses his experience in performing this or similar tasks. In fact, experience can sometimes be a valuable tool for leaders to use. Let me give an example.

During a deployment to a desert training area, a support platoon was driving many miles during both daylight and darkness in support of their tank battalion. During these movements, the dust from the vehicles could be seen for miles. The platoon sergeant, who had deployed to the desert numerous times throughout his career, informed his platoon leader of the problems associated with driving in the desert. The platoon leader did not think it was a major problem, so he did not take it into consideration while completing his daily risk assessment.

One day at the evening convoy briefing, the platoon leader instructed the drivers to maintain only 50 meters distance between vehicles during that night's movement to avoid separation among the vehicles. When asked by several of the drivers about this requirement, the platoon



leader stated that it was unlikely that following so close would cause any problems, and that the drivers would just need to stay alert during the mission.

As you've probably already guessed, this platoon leader failed to properly gauge the impact of his decision. At one point during the night move, the platoon leader stopped his vehicle abruptly. The 5-ton truck that was following him had to brake hard to avoid a collision. The next two vehicles were also able to avoid a collision. However, the last three vehicles in the convoy were not as fortunate. The collision resulted in two injured drivers and three heavily damaged vehicles. All because the platoon leader failed to properly assess the hazards his unit faced. Regrettably, he did not appreciate the experience of the platoon sergeant; he did not recognize that the hair stood up on the back of his men's necks when he described the plan of operation; he did not appreciate the courage it took for his platoon sergeant and his unit to raise concerns for their personal safety and the success of their mission.

No, the platoon leader didn't have the personal experience to adequately assess the hazard. But he had plenty of clues and opportunities to get to the truth about the risks and consider the consequences. One of the Army's great strengths is learning from the successes and failures of each other, and growing stronger on that foundation.

The next time you see something that just doesn't look right, take a moment and ask yourself how this might impact you, or the soldier next to you, or your unit, or the family of four who might be driving down the road as your convoy approaches.

Safety is not a sometimes thing, and your actions don't just affect you. Exercise the courage to tell the truth about risks, and to face the potential consequences. That way, you and your unit can avoid those consequences.

This information gives you as an individual, your unit, and the Army an advantage: Armed with knowledge that the hazards in your task or mission are identified (Step 1); and the hazards are assessed (Step 2); now, controls can be developed and selected (Step 3). Stay tuned for more on Step 3 next month.

—LTC Andrew Atcher, Ground Systems and Accident Investigation Division, DSN 558-9525 (334-255-9525), atcherd@safetycenter.army.mil

Spatial disorientation HUD/ODA survey

The unpredictability of spatial disorientation combined with the stress of night operations makes it necessary to determine what experiences aviators have had concerning disorientation while using head-up displays (HUDs). A short survey was developed to gather information from Army aviators who use or have used the aviator night vision imaging system/heads up display (ANVIS/HUD) and/or similar counterparts such as the optical display assembly (ODA). If you have used the HUD or ODA, please consider completing the survey that can be found at the following web address: **www.usaarl.army.mil/hudsurvey/anvishudoda.htm.** Information provided will be used by the U.S. Army Aeromedical Research Laboratory to assess potential problems in this area and, if necessary, to design and test countermeasures. Thank you for your assistance with this project!

—US Army Aeromedical Research Laboratory

How's Your Harness?

The mission was a simple one. Complete night vision goggle (NVG) hoist qualification for a flight medic and pilot to complete NVG readiness level progression. The crew consisted of an instructor pilot (IP), pilot (PI), crew chief standardization instructor (SI), and medic (MO). The location where the training was to be conducted had been picked out the day before and used the previous night by the same IP.

At approximately 4500' in elevation, the layout of the location was a challenging one. Approximately 50' in width (north to south) and 100' in length (east to west) with a 9 degree slope up to the south side and surrounded by pine trees. One hundred feet south and two hundred feet east of the target area, an "L" shaped cliff rose to a height of 300'.

The IP was seated in the right cockpit seat, PI in the left, MO at the right crew station, and SI on the left. The aircraft was configured for medevac operations (high performance hoist and carousel installed with the hoist on the right side). The wind was from the east at about fifteen knots and the moon was at almost ninety- percent illumination.

NVG hoist qualification required both the PI and MO to complete four lifts with a 200# weight; one from 50', two from 100' (one with a simulated emergency procedure), and one from 200'. Due to a lack of available personnel, no ground assistant was available to switch the jungle penetrator for the weight, so the decision was made to simply use the weight. On the initial recon for the flight, the SI had dropped some chem sticks for the medic to use as a target while lowering the weight.

While the PI hovered into the wind, the MO proceeded to move from his seat into position by the hoist and secure himself to the floor of the aircraft using his safety vest assembly (monkey harness) while the SI moved into the right crew seat to monitor the MO. The 50' and 100' lifts were uneventful. The medic had no difficulty hitting his target or controlling the weight and the pilot was able to maintain sufficient ground references to minimize his drift.

Problems began when the pilot completed a small traffic pattern and returned to a 200-foot hover over the target area. Although he was hovering into the prevailing wind, a combination of turbulence near the top of the cliff and lack of visual cues made holding a steady hover difficult for him. This unsteady hover in turn caused the weight to begin oscillating under the aircraft as it was being lowered. The medic attempted to arrest the movement of the weight, but underestimated its momentum and was pulled from the aircraft. At this point a calm SI stated, "He just fell out." The calm manner of the standardization instructor helped eliminate the initial sense of panic felt by the instructor pilot. "He's OK. He's hanging by his harness. I'm going to try and pull him in."

The SI then repositioned his harness into a position that would allow him to reach the medic. While he was doing that, the IP was clearing the right side of the aircraft and instructing the pilot to descend vertically. Attempts to pull the medic into the aircraft were unsuccessful and it became apparent that a landing would be required.

The pilot continued to descend vertically toward the landing area, with the IP and SI clearing the aircraft, then asked, "Are we landing?" He had been concentrating so hard on his hover work that he was unaware that the medic was hanging beneath the aircraft by his harness. He had only been responding mechanically to the instructor pilots directions to begin a slow vertical descent.

During the descent, the IP suggested using the hoist control panel, located in the cockpit, to reel in cable as the aircraft descended. (The hoist control pendant had egressed the aircraft with the medic.) However, the cable had already become tangled in some trees and reeling it in was not feasible. The option of cutting the cable to ensure it remained clear of the aircraft

during landing was ruled out because 1) it could easily injure the medic by whipping past him and 2) he had been holding on to the hoist cable to keep from spinning.

The final decision was to continue a slow descent while ensuring the hoist cable remained clear of the aircraft. The SI kept the pilot informed of the cable status while the aircraft was landing. The aircraft touched down with a grateful medic and no difficulties from the cable.

It is worth noting that the medic's intercom cord remained connected throughout the incident and he was able to communicate his well being (or lack thereof) to the rest of the crew. He had properly worn his harness (other than the length) and suffered only minor chafing on his upper thighs. The medic stated during the after-action review that had the leg straps not been properly secured, he was certain that they would have pulled across a sensitive portion of his lower anatomy. He had also properly worn the neck cord for his NVGs, which hung nicely until the aircraft had landed and he could reattach them to his helmet. The SI was able to free the hoist cable and reel it in.

The medic finished his training that night then had one heck of a story to share when he returned to the airfield.

Among the many learning points, a few come readily to mind. The most obvious lesson being the length of the harness. While performing as intended, its designed use shouldn't have been necessary. This is a pertinent teaching point for any unit trainer involved in hoist work. Also, it seems that crew coordination was initially inadequate due to the pilot not understanding the severity of the situation. Although this merits discussion, it is apparent the crew quickly pulled together to avert a life threatening situation. It is now obvious that harness length and procedures for dealing with an emergency of this nature are topics that must be included in crew briefings prior to engaging in hoist work. It is also just as important for the hoist operators to verbally confirm the pilot on the controls has adequate visual references to maintain a steady hover before beginning to reel hoist cable out.

A situation that could have easily been tragic ended without injury to personnel or damage to equipment. A tense few moments were transformed into a learning tool that will hopefully prevent future injury or save a life. This experience is a testament to our equipment and professionalism.

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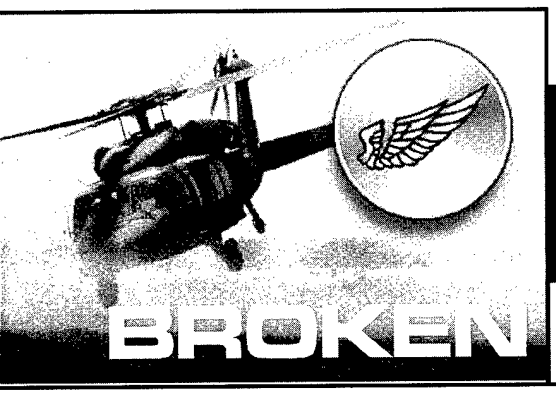
Speaking of harnesses...

In a recent accident investigated by the Safety Center, the crew chief was injured when he fell out of the aircraft during the accident sequence. His Safety Restraint Assembly was not properly adjusted in accordance with Aircrew Integrated System Advisory Message AIS 97-08. In the same accident, another crewmember was not using a complete Safety Restraint Assembly, just the strap. The strap was secured to his Aircrew Survival Armor Recovery Vest (SARVIP), in contravention to the warning in the operator's manual, TM 1-1680-359-10. The warning states "THE SARVIP VEST IS NOT DESIGNED TO BE USED IN LIEU OF THE GUNNER/HOIST OPERATOR RESTRAINT HARNESS."

When you're not flying...

The Army's Medical Department Center and School has developed an innovative website to help runners learn everything there is to know about running shoes, and the appendages that go into them. Check out: **http://cs.amedd.army.mil/aegis/**

—COL Valerie Rice, Director, Operation Aegis, Fort Sam Houston, TX , DSN-471-0118 (210) 221-0118, Valerie.Rice@@CEN.AMEDD.ARMY.MIL, and CPT Allyson Pritchard,



The Army Aviation Broken Wing Award recognizes aircrewmembers who demonstrate a high degree of professional skill while recovering an aircraft from an inflight failure or malfunction requiring an emergency landing. Requirements for the award are in AR 672-74, Army Accident Prevention Awards.

CW3 Allen Raye and CW3 Peter Schuesler

CW3 Schuesler and CW3 Raye were awarded the Broken Wing award for their actions during an MH-60L engine failure emergency. They were on an aircraft accident recovery mission in a remote and rugged, heavily vegetated mountainous environment. This mission required that soldiers rappel from the helicopter high above the crash site, while their equipment was lowered to them via the aircraft's external hoist. Combined conditions placed the aircraft in a mode where single engine flight was not possible at slow airspeed or at a hover.

Aircraft mission weight was kept at a minimum. Aircraft gross weight was critical because Out-of-Ground Effect (OGE) power was essential to conduct the mission. Based on steep slope and terrain, the aircraft needed to operate at an OGE stationary hover.

Just prior to the incident, CW Schuessler maneuvered the aircraft away from the infiltration site and transferred the controls to CW3 Raye. CW3 Raye was maneuvering the aircraft in a slow left turn and decelerating below 30 KIAS on final approach when the low rotor RPM alarm sounded.

CW3 Raye lowered the collective to regain rotor RPM. At the same time, the aircraft began to settle downward toward the nearly vertical slope of the mountain side less than 20 feet away. As the Low Rotor RPM continued to sound, CW3 Schuessler took command of the flight controls and executed a descending right turn; the proximity of the terrain and altitude offered no room for error.

CW3 Schuessler maneuvered the aircraft down the mountainside less than 10 feet above rocks and vegetation, gaining the needed single engine airspeed to keep the aircraft aloft and flying.

The only safe and suitable landing area was fifteen miles away. CW3 Schuessler continued to fly the aircraft while CW3 Raye confirmed the engine failure. En route to the landing area with the aircraft stabilized, the controls were transferred again to CW3 Raye. He completed a roll-on landing without further incident.

The actions of CW3 Scheussler and CW3 Raye not only prevented the loss of a valuable helicopter but also more importantly saved the lives of all four US Army soldiers on board.

CW2 Robert J. Ladd and CW3 Kelvin Holt

CW2 Ladd and CW3 Kelvin Holt were awarded the Broken Wing award for actions in an AH-64A performing an aerial reconnaissance mission in Bosnia. The aircraft was in cruise flight with the pilot on the controls when the aircraft began experiencing strong vibrations. The aircraft was over steep, heavily wooded hills with possible anti-personnel mines in the landing area.

Shortly after the vibrations began, the aircraft began to fishtail about five feet, left to right. CW2 Ladd was on the controls. The PC, CW3 Holt, briefly took the controls and determined that the severity of the vibrations required a return to base. CW3 Holt then turned the aircraft. The vibrations became worse because part of the trailing edge of the blade separated completely. CW2 Ladd announced that he was getting back on the controls to help land the aircraft. Both pilots used proper aircrew coordination techniques throughout the emergency.

CW3 Holt began an approach to the only landing area available, steep terrain possibly

infested with anti-personnel mines. CW3 Ladd announced that he was applying the brakes, and remained on them so that CW3 Holt would not have to let go of the controls as he set the brakes. The steepness of the slope made the usable touchdown area about 25 feet wide by 60 feet long.

As the aircraft was landed, it began to settle to the left side. The settling to the left became more pronounced when the rotor system began to slow down after engine shutdown. CW2 Ladd got out of the aircraft after the rotor system stopped and sat on the right winglet to try to prevent the aircraft from rolling over while CW3 Holt was still inside the aircraft. Throughout the incident, both pilots used appropriate and proper aircrew coordination techniques.

Congratulations to these recipients, whose skill, judgment and technique resulted in the Broken Wing awards.

—Mr. Richard Lovely, USASC, DSN 558-2781, (334) 255-2781, lovelyr@safetycenter.army.mil

Safety Guardian award

The United States Army Safety Guardian award is presented for extraordinary individual action in an emergency situation.

CW3 Timothy J. Burke/ SSG Sidney Hudgens

CW3 Burke and SSG Hudgens received the Guardian award for their performance during an incident involving a CH-47D helicopter. This aircraft was flying as trail aircraft in a six-ship NVG formation flight, operating under zero illumination. The aircraft was transporting 25 combat–loaded Rangers.

CW3 Burke was on the controls when unusual noises and vibrations were heard from the vicinity of the number 2 engine. After scanning the engine instruments, CW3 Burke notified the crew of engine failure and asked the crew chief to check the number 2 engine for fire.

The crew chief then announced that the engine was on fire and CW3 Burke immediately began a descent for a landing in an open field. As CW3 Burke put the aircraft in a descent for a roll-on landing, the flight engineer noticed that the field was covered with sheets of plastic. CW3 Burke aborted that landing, and began an approach to an adjacent area, a soccer field in the middle of a well-lit town.

At about one-quarter of a mile from the target landing area, the flight engineer spotted wires slightly above the aircraft and in the path to the landing area. CW3 Burke, using a combination of available power and aft cyclic, got the aircraft to climb over the wires. After clearing the wires and re-establishing his approach, CW3 Burke safely landed the aircraft in brownout conditions. As soon as the aircraft stopped, CW3 Burke and his co-pilot executed an immediate shutdown of the remaining engine.

SSG Hudgins was serving as Flight Engineer during this incident. After verifying the status of the fire, SSG Hudgins was busy ensuring that the 25 passengers were secured and in a crash position for landing. Looking out once again at the first intended landing area, he noticed that the selected area was a rice paddy with sheets of plastic covering it, and notified the PIC who aborted that landing. While continuing to prepare passengers for landing, he noticed that wires were directly in front of the aircraft and about the same altitude. He immediately announced "Wires! Climb, climb, climb." The PIC initiated a climb and missed the wires by approximately 40 feet. SSG Hudgins and his crew chief successfully evacuated all 25 passengers while under NVGs and in brownout conditions.

CW3 Burke demonstrated skill and performed actions which prevented serious damage and possibly complete destruction of the aircraft, as well as serious injuries of loss of life for the passengers and crew. SSG Hudgins demonstrated a preeminent degree of skill and situational awareness, preventing serious damage and possibly serious or fatal injuries for passengers and crew.

Accident briefs

Information based on *preliminary* reports of aircraft accidents

AH64

Class C

A series

■ Reported uncommanded arrest of No.1 engine during MTF. Power-on landing was executed with reported over-temp and over-torque of the No.2 engine.

Class B

A series

■ Main rotor blades contacted tree during terrain flight, resulting in damage to three blades.

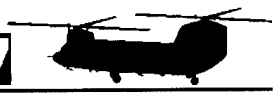
Class E

A series

■ Crew smelled electrical smoke in the cockpit and suspected electrical fire. Flight terminated on airfield. Maintenance crew also smelled smoke as they approached aircraft, but found no evidence of fire. Maintenance crews could not pinpoint the source of the fumes.

■ While in contour flight, cockpit began filling with smoke and burning odor was detected. Aircrew made a precautionary landing and aircraft was shutdown without further incident. Maintenance replaced turbine on ENCU and aircraft was returned to service.

CH47



Class C

D series

■ During power up for flight, APU power turbine separated from the No.1 housing. Some sheet metal damage sustained to aircraft.

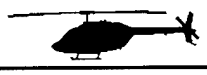
Class E

D series

■ During hover, No.1 engine failed. Aircraft landed without further incident. Replaced engine.

■ Aircraft was flown for 2.0 hrs, shutdown and refueled. Aircraft sat idle for 1.5 hrs. On start attempt for second flight, No. 2 engine failed to accelerate to 50% N1 and start was aborted. Three attempts were made to start the No. 2 engine to include max acceleration of the No.1 and only momentarily holding the start switch to start. The No. 1 engine was shutdown and the No. 2 engine was started first. The No. 2 engine accelerated smoothly to 50% and started. With the No. 2 engine running No. 1 engine failed to accelerate to 50%. Unsuccessful attempts were made to start No. 1 engine in the same manner. Engine replaced to correct hang start.

OH58



Class A

D-I series

■ Aircraft encountered brownout conditions while attempting to terminate a terrain approach. While descending, the aircraft drifted forward and right and contacted the ground. Aircraft destroyed.

Class C

D-I series

■ Aircraft contacted commo wire at 5 feet AGL and landed hard, damaging the landing gear, tail boom and stinger.

Class D

D-I series

■ While conducting Mass mounted sight checks during run-up, MMS would not change field of views in the Thermal Imaging Sensor and would sometimes change on its own with no input from the pilot. Aircraft shutdown and released to maintenance. Replaced thermal imaging system TIS.

AH6

Class C

J series

■ During flight, aircraft experienced a series of loud reports, illumination of engine-re-ignition warning light, and power loss/settling. Aircraft landed hard. Postflight inspection revealed damage to tail stinger and tail rotor blades.

RC12

Class E

K series

■ During cruise flight at FL 320, 130 kias, the No.1 engine oil temperature indicated 135 degrees. Power was reduced from 48% to 25% torque and aircraft descended to FL 280. Oil temperature returned to normal range within 4 minutes. Aircraft landed without further incident.

TH67

Class E

A series

■ During flight, aircraft's main and standby generators failed. Aircraft landed without further incident. Replaced starter generator.

UH60

Class A

L series

■ During sling load operations of an M998 HMMWV, aircraft came to rest on top of the M998 with major damage to aircraft and M998. Five aircrew members were admitted to hospital with back and neck injuries. Aircraft destroyed.

Class C

A series

■ During flight, with the cabin doors open for over water flight, the Jungle Penetrator was not secured. Damage was done to the aft cabin wall and to the hoist assembly, due to the JP swinging in the slipstream.

L series

■ Postflight inspection revealed stabilator damage. Accident Aircraft had been Chalk 2 of an air assault training mission.

Class D

A series

■ During training operations, main rotor tip cap struck tree branch.

Class E

A series

■ While conducting ATM training, both No.1 & No.2 NP and RPMR rolled back simultaneously to 93%. PC took controls and lowered the collective while actuating the inc/dec switch. Aircraft would not respond. PC reduced the collective to full down in preparation for an autorotational approach to airfield. NP & RPMR returned to 100%. The flight was terminated with a roll on landing. During ground taxi the RPMR and NP again dropped to 96% and then returned to 100%.

CORRECTION

In the February accident briefs, the mishaps appearing under OH-58 should have been under the UH-60 category. Thanks to all the sharp-eyed readers who told us about it.

For more information on selected accident briefs, call DSN 558-9855 (334-255-9855). Note: Information published in this section is based on preliminary mishap reports submitted by units and is subject to change.

QUAD A 2000 Awards

The Army Aviation Association of America presented its annual awards during the Aviation Leaders Training Conference 2001. Nominations for each category can come from commanders, individual members or each of the 65 chapters of AAAA.

For outstanding individual contribution, the *Army Aviation Trainer of the Year* award went to **CW3 Robert B. Rainier**, B Company, 1st Battalion, 160th Aviation Regiment.

The *Aviation Medicine Award* went to Fort Rucker's **LTC Walter J. Lawrence**, US Army Aeromedical Center. The award recognized Lawrence as the flight surgeon or medical physician assistant that best exemplified the medical contribution to Aviation during 2000.

The *Aviation Fixed Wing Unit* award was presented to the fixed wing unit that has achieved the highest level of excellence in flying, safety, logistics, operation and support.

The 204th Military Intelligence Battalion walked away with those honors. Accepting the award was **Lt. Col. Charles R. Mehle II**, commander, and **Command Sgt. Maj. Charles R. Holloway**, battalion command sergeant major.

The *Air/Sea Rescue* award for the unit whose crew performed a rescue, saving a life or easing the suffering of an individual or individuals, was presented to the 571st Medical Company (Air Ambulance). The commander, **Maj. Joseph G. Eckert**, and the company's first sergeant, **1st Sgt. Michael Brennan**, accepted the award.

The members of the 3rd Battalion, 58th Regiment from Camp Bondsteel, received the *Air Traffic Control Facility* award. Their facility earned the highest ranking as the facility which has greatly contributed to safe and efficient air traffic control. **Lt. Col. Eric M. Nelson**, commander, and the unit's command sergeant major, **Command Sgt. Maj. Charles A. Momon**, accepted the award.

For the tactical air control unit which has achieved significant objectives in accomplishing the tactical mission, the *Air Traffic Control Company* award went to C Company, 3rd Battalion, 58th Regiment. **Capt. Bryan K. Phillips**, commander, and the company's first sergeant, **1st Sgt. Joseph L. Hawbecker**, accepted the award.

The *Air Traffic Controller* award went to **Staff Sgt. Scott E. Nutter**, D Company, 1st Battalion, 58th Regiment at Hunter Army Airfield, Ga. The award is presented to the air traffic controller who has demonstrated superior performance through selfless service.

For commendable contribution to the management of air traffic control through the development of new air traffic control procedures, **Sgt. 1st Class Bobby Griffin** was given the *Air Traffic Control Manager* award. Griffin is with E Company, 1st Battalion, 58th Regiment at Fort Drum, N.Y.

Two students were also honored. **Katherine A. Oleksiak** and **Hartleigh Caine** were named Outstanding ROTC Cadet of the Year and Outstanding USMA Cadet of the Year, respectively.

A FLYER'S CODE OF CONDUCT

You may have seen the expression "a good pilot is always learning" on one of your favorite aviation periodicals. This statement holds true not only for the lieutenant or warrant officer recently out of flight school, but also for the seasoned veteran with thousands of hours in a variety of environments. A pilot's continuing education is not limited to maneuvers and missions, it is also critical that crewmembers continue to learn how to perform these tasks in the safest possible manner.

The key elements in safe mission completion have not changed since the horse was the primary maneuver vehicle. **Avoid** unsafe situations, **Recognize** events or actions that lead to accidents, and **Recover** properly when unplanned events take place. As our knowledge and technology improves, we find new and better ways to deal with known hazards in the aviation environment. The latest new way becomes the 'hot' topic for a period of time until the next hot issue arrives or the statistics swing in a new direction. To turn this phenomenon to our advantage, we must allow these lessons to build on previous ones and not simply push them aside.

An additional complication is the numerous sources that safety and standardization guidance comes from. There are literally hundreds of AR's, FM's, TM's, TC's, SOP's, and policy letters that contain valuable information to the aviator. Indeed, even this publication has invaluable information in every issue. Let us try to keep it simple and focus on those items that have been present in almost every accident over the last several years. Unfortunately, the most common causal factor in recent accidents continues to be the actions of the pilot. More importantly, this means that it is within our power to change these faults.

The following is a list of essential elements to safe mission completion that can serve as a pilot's personal safety checklist:

1. I am adequately rested, in proper health, and not influenced by some inappropriate medication or recreational substance.

The nature of military personnel is to get the job done. It is difficult for most of if we feel like we are letting our comrades down or someone else is picking up your 'Slack'. Although standards are set forth in AR 40-8, SOP's and policy letters, the issue of appropriate rest and health is, for the most part, a personal one in that you cannot necessarily see when someone is ill or only had two hours of sleep. It falls to the integrity and moral courage of the individual to say,"I really should not be flying today".

2. I have quelled any desire to exceed standards or my briefing for the 'thrill of it'. I impress people with my professionalism, not with how far I can push the limit.

It is remarkable how many accidents take place in front of an audience. Our need to show off for the crowd or to impress the new guy has resulted in many incidents of crewmembers exceeding not only the limitations set forth for the aircraft, but their personal limitations as well, often with tragic results. Ask yourself

"would I try this with my SIP on board?"

3. I have analyzed and adjusted for all of the risks involved, and will continue to minimize or eliminate hazards I encounter. The risk management process is an extremely valuable tool that encompasses continuous assessment of the situation and a series of decisions and actions that allow for the lowest amount of necessary risk exposure. It may not be the path of least resistance but it should be the path of fewest unnecessary hazards. You are the risk manager, all day, every day.

4. I know exactly how this aircraft will perform in this set of conditions, and that it will remain within safe operating parameters throughout the entire flight.

One of the more recent accident trends is improper power management. It is imperative that you remain aware of changing conditions and the performance parameters of your airframe for every flight. A maneuver that went well back home in cool weather may be completely outside of available power margins in the summer or at NTC.

Be a diligent planner and focus on key elements such as:

Out of Ground Effect Power, Single Engine Capability, or Tail Rotor Effectiveness.

Limiting factors should be discussed during the mission brief.

5. I am confident that this crew mix is appropriate, and that we use the elements of crew coordination in every flight task from beginning to end. I respect the opinions of my crew.

We maximize our effectiveness as a flight team when we utilize crew coordination.

Keep in mind that it begins with assigning crews that ensure a balance of experience and ability. Be warned that it is easy to become complacent when you continuously operate in a familiar environment. This includes the people you fly with. It is also critical that you maintain a climate in the aircraft in which other crewmembers feel they can voice their opinions. If you make it difficult for them to have input, you will not get any when you need it.

6. I recognize that when minor problems begin to accumulate, I will modify or terminate before a chain of events overwhelms me.

Almost every accident since the beginning of flight has a traceable series of actions, decisions, and circumstances that led to the final incident. Situational awareness is a term that most are familiar with and it includes not only what is happening right now, but also the progress of the flight thus far and the correct anticipation of what is to come. Recognize that conditions are leading you into a situation beyond your capabilities. Never be afraid to make the decision to stop.

7. I will always strive for mission accomplishment, unless it unnecessarily endangers others or myself.

As Army Aviators, it is our job to get the mission accomplished whenever possible.

You may find yourself in situations where you want to say "sorry we can't do this mission". Be flexible enough to tell the supported unit that you could do the mission if a few changes were made. Remember that it is our job to DO the mission in the safest manner possible. We may also have to weigh the importance of the task as a factor in your risk assessment. Sometimes that may indeed mean we cannot do the particular mission, many times it is a matter of making the appropriate modifications to ensure we can do so safely. This should be accomplished as early as possible in the planning process.

I acknowledge that checklists and briefings are important elements of every flight and are not merely for use in ideal circumstances.

Keep in mind that these tools are written for a reason and no matter how proficient you become, the checklist keeps the flight going the way it is supposed to and helps you catch mistakes. Briefings are the check and balance and serve as the template for the conduct of your mission. There is no acceptable reason for not following this guidance.

8. I will resist any false sense of urgency that may affect my decision-making.

As we strive to make training progressively more realistic, it is very easy to get caught up in the moment and feel a sense of pressure to get the mission done at all costs. It is imperative that at all levels we keep in perspective that it is, in fact, only training. As General Wickham said " Nothing we do in peacetime warrants the unnecessary risk of life". This also includes get-home-itis.

9. I am focused on the task at hand, and not distracted by other things that may be happening in my life.

Avoiding distractions is fundamental to situational awareness, and discussions of topics unrelated to your flight have no place in the cockpit. By the same token, you must be able to concentrate on your flight, and you may have to separate your private life from your flying to do so. If you cannot do this, take yourself off of the flight schedule until you can.

10. I accept the responsibility that has been entrusted to me.

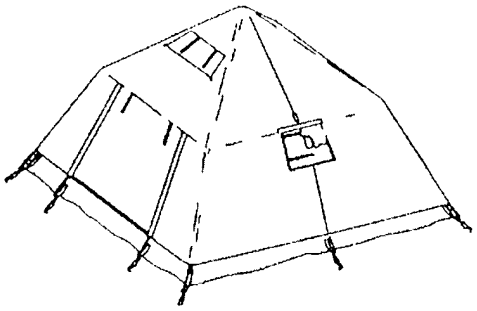
This occupation, by its very nature, carries with it an enormous amount of accountability. You are a member of a society of professionals. The safety of everyone you work with is quite literally in your hands.

Do not take this lightly.

These steps are fundamental and by no means complete. It is simply a reminder that when we preflight we begin with ourselves. Remember what a wise aviator once said, "experience is something you get just after you needed it".

CW3 Scott Chandler
IP/ASO
B Co 1-223rd Avn Regt

Soldier crew tent warning



The Army recently lost two soldiers as a result of carbon monoxide poisoning. While on a field training exercise, two soldiers returned to their Soldier Crew Tent and started a commercial off-the-shelf (COTS) heater to warm up. The soldiers then closed the tent while the heater was on. Because the tent was essentially air tight, a lethal environment was created not only by the carbon monoxide from the heater but also from oxygen depletion from combustion and the soldiers' own breathing.

A factor in this accident was the use of an unvented commercial off-the-shelf heater. Warnings specified in ground precautionary messages indicate that the use of unflued or unvented heaters is inherently dangerous because they vent exhaust containing carbon monoxide into living spaces. Similar warnings as well as risk mitigation steps to include following manufacturers instructions, leaving tent doors and roof flaps open to allow air circulation, and using carbon monoxide detectors appear in safety of use messages as well as on the heater itself. Despite these warnings, the chain of command failed to inform or train subordinates of the dangers involved when using unvented heaters.

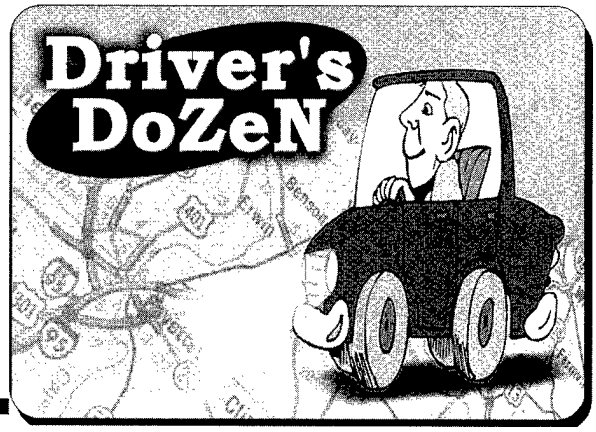
The Soldier Crew Tent also poses a hazard in that its fabric does not breathe. As noted in the operator's manual, all windows and flaps must be open to provide adequate ventilation. If windows and flaps are closed, it is possible to use all oxygen contained in the tent, especially during sleeping hours, resulting in death. The tent in combination with an unvented heater creates a high-risk hazard of possible suffocation and carbon monoxide poisoning. These dangers must be carefully risk managed with control measures that ensure the safe use of the tent during sleeping periods.

Another contributing factor in this accident was the implied approval by the chain of command of unvented propane heater use. Soldiers continually observed their use in the field so they assumed it was a normal procedure. Both the chain of command and the users became complacent in its use and these actions subsequently led to the accident. Supervisors at all levels must use risk management to identify potential hazards and establish controls to ensure the safety of subordinates. Leaders *must* enforce standards and continually be aware of possible hazards. In this case, the chain of command tacitly allowed the risk to exist and failed to follow their established procedures. Enforce the standards — don't let this silent killer get to you or your subordinates.

Gene M. LaCoste
Brigadier General, GS
Director of Army Safety

Get the New Video—

A young soldier encounters Sergeant Safety during inprocessing to his first duty station. The Sergeant takes the young soldier around the installation, choosing 12 areas of traffic safety on which to focus. In the process, the soldier begins to understand that traffic safety is more than just rules.



Attention Commanders and First Sergeants!

The Safety Center has a new video tool ready for you to use as part of your POV traffic safety program. It's a remarkably brief (15 minutes), lively and entertaining show in which SGT Safety targets 12 traffic safety points and shows the consequences of bad driving decisions. Every soldier, family member, and new civilian employee should see it. Driver's Dozen is available now.

■ Go to our website: http://safety.army.mil

■ Clilck on MEDIA-VIDEOS-POV VIDEOS-Driver's Dozen

A Facilitator's guide is available for download, as well as ordering instructions.

DRIVER'S DOZEN

1. Seatbelts—*Cut your chance of being killed or seriously injured.*

2. Airbags—*Allow 10 inches between steering wheel and driver, in case it inflates.*

3. Child safety—*Use the correct child safety seat; 12 years and under—"Back is where it's at."*

4. Motorcycle safety—*It won't be pretty to see what's left after the G-forces perform experiments on your body. Wear the following protective equipment—*

■ *DOT-approved helmet*

■ *Eye protection*

■ *Long-sleeved shirt or jacket*

■ *Long trousers*

■ *Brightly colored top during day*

■ *Reflective during night*

■ *Full-fingered gloves*

■ *Sturdy footwear (leather boots or over-the-ankle shoes)*

5. Bicycle safety:

■ *Use marked paths when possible.*

■ *See and be seen; wear proper clothes and reflectors.*

■ *"Go with the flow" when riding on the street (in the same direction as vehicle traffic), and use hand signals when turning.*

■ *Wear a helmet.*

6. Pedestrian safety—

■ *Use marked paths when possible.*

■ *See and be seen; wear proper clothes and reflectors.*

■ *"Go with the flow" when skating on the street (in the same direction as vehicle traffic), and use hand signals when turning.*

■ *Wear protective equipment—helmet, wrist guards, and knee/elbow pads.*

■ *Make sure your equipment fits and is properly adjusted.*

■ *Especially watch for children walking to and from school, loading and unloading school buses, and playing in housing areas.*

7. Headphone use—*The ONLY place you can listen to tunes is on a track.*

8. Vehicle inspections— *Download checklist from* ***http://safety.army.mil****. List includes—*

■ *Safety belts*

■ *Lights*

■ *Window tint*

■ *Exhaust system*

■ *Brake systems*

■ *Wipers*

■ *Horns*

■ *Suspension*

■ *Steering systems*

■ *Wheel assemblies*

■ *Tires*

9. No laser or radar detectors are allowed on post.

10. Alcohol—*No open containers in passenger compartment.*

11. Post-specific rules—*Ask your first-line supervisor.*

12. Driver's training—*4 hours of training for age 26 and under.*

—POC: James "Al" Brown, USASC Traffic Safety Manager, DSN 558-3421, brownj@safetycenter.army.mil

Most Recent Safety Messages Issued by AMCOM

Date	Message Number	Subject	Suppl Info (pdf file)
172100Z Jan 01	UH-1-01-ASAM-02	Inspect Fuel Quantity Transmitters	None
172110Z Jan 01	OH-58-01-01	Replacement of Compressor Scroll	None
181630Z Jan 01	UH-1-01-03	Inspect Mast Assembly	None
251830Z Jan 01	AH-64-01-ASAM-05	Hydraulic Fluid Sampling	None
252130Z Jan 01	UH-1-01-04	Inspect Mast Assembly	None
121443Z Feb 01	CH-47-01-02	Inspect Droop Stops	Diagrams
030504Z Feb 01	CH-47-01-ASAM-07	Inspect Untested FSP Bolts	None
161845Z Feb 01	CH-47-01-03	Incorrectly Installed Droop Stops	Diagrams

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U.S. ARMY SAFETY CENTER

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